

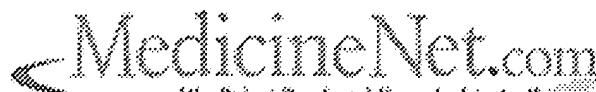
Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	280	602/46	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 14:33
S1	478	606/216	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 12:55
S2	732	606/215	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/03 13:32
S3	425	606/214	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/03 14:22
S4	1998	606/213	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/03 13:35
S5	170	tetreault.in.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/03 14:22
S6	2	tetreault.in. and "606"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/03 14:23
S7	619	dome and (bandage or dressing)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/04 09:10
S8	273	dome and (bandage or dressing)and rigid	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/04 09:17
S9	3	("6107536").URPN.	USPAT	OR	OFF	2005/08/04 09:15
S10	6	("4285338" "4667666" "4726364" "4870977" "4905681" "4972829").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 09:16

S11	1098	602/41 or 602/42	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 10:19
S12	122	dome and (bandage or dressing)and rigid and transparent	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/04 09:18
S13	505	d24/189	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 10:26
S14	576	128/888 or 128/889	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 10:39
S15	359	602/43	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 10:42
S16	550	602/54 or 602/55	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 10:46
S17	471	602/55 or 602/57	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 11:51
S18	620	602/58 or 602/59	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 12:12
S19	5	(("5397628") or ("3732578")).PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 12:05
S20	6	friction near3 low and (128/893 or 128/894) and adhesive	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/04 12:36
S21	179	602/56	US-PGPUB; USPAT; USOCR	OR	OFF	2005/08/04 12:12
S22	2	("2943623").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 12:36
S23	807	(428/71).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 13:03

S24	0	(623/33or623/36).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 13:04
S25	377	623/33 or 623/36 or 623/37	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/08/04 14:33

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Definition of Tetrafluoroethylene

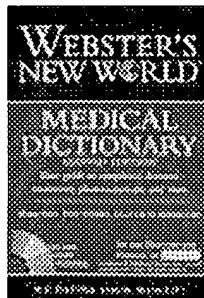
Tetrafluoroethylene: A substance that is a possible carcinogen (cancer-causing agent) used in the production of polymers such as polytetrafluoroethylene.

The US government in 2000 classified tetrafluoroethylene as "reasonably anticipated to be a human carcinogen." In laboratory animal studies of tetrafluoroethylene, cancer was observed in multiple organs of multiple species following long-term inhalation exposures.

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Coefficients of Friction for Teflon

The Physics Factbook

Edited by Glenn Elert -- Written by his students
An educational, fair use website

Bibliographic Entry	Result (w/surrounding text)	Standard Result
Walker, James S. <i>Physics</i> . 2nd ed. New Jersey: Pearson Education, 2004: Page 139.	<u>Materials</u> <u>Kinetic</u> <u>Static</u> Teflon on Teflon 0.04 0.04	0.04
Reference Tables for Physical Setting/Physics. State Education Department of New York, 2002 Edition.	<u>Approximate Coefficients of Friction</u> <u>Kinetic</u> <u>Static</u> Teflon on Teflon 0.04	0.04
Teflon Fluorocarbon Resin. Omega Engineering, 2000.	<u>Teflon</u> <u>Teflon</u> <u>Teflon</u> <u>PTFE</u> <u>FEP</u> <u>PFA</u> Coefficient of Friction 0.1 0.2 0.2 Dynamic	0.1 - 0.2
Sears and Zemansky. <i>College Physics</i> . 3rd ed. Massachusetts: Addison-Wesley, 1960: 31.	<u>Materials</u> <u>Static</u> <u>Kinetic</u> Teflon on teflon 0.04 0.04	0.04
Teflon Industrial Coatings - Typical Properties. DuPont. 2003.	<u>Property</u> <u>Teflon</u> <u>Teflon</u> <u>Teflon</u> <u>Teflon</u> <u>Coefficient of Friction</u> <u>PTFE</u> <u>FEP</u> <u>PFA</u> <u>ETFE</u> -static 0.12- 0.12- 0.2 0.24- 0.15 0.20 - 0.50 -dynamic 0.05- 0.08- - 0.3-0.4 0.10 0.3 - 0.4	0.05 - 0.4

Teflon is the trademark name DuPont uses for the compound polytetrafluoroethylene (PTFE) and three similar compounds: perfluoroalkoxy polymer resin (PFA), fluorinated ethylene propylene copolymer (FEP), and the copolymer of ethylene and tetrafluoroethylene (ETFE). The American chemist Roy J. Plunkett (1910-1994) discovered Teflon (PTFE) in 1938. Teflon was invented for machine parts. Several years later a Frenchman used it to coat a frying pan. Today Teflon is often used in cookware like pans; the reason for this lies in its properties. It was first shown to the public as a commercial product in 1946.

The force of friction is calculated by the formula...

$$F_f \text{ (force of friction)} = \mu \text{ ("mu" or coefficient of friction)} * F_n \text{ (normal force)}$$

Both F_f and F_n are measured with the unit N (Newton). In order for F_f and F_n to have the correct unit N in the formula, μ therefore must be unitless.

Teflon is the type of plastic that has the lowest coefficient of friction meaning this synthetic material has a slippery feel to it; this is the reason why it is used to make non-stick pans. Both the coefficient of kinetic friction and the coefficient of static friction for this material are low. The most common value found for the coefficient of kinetic friction (μ) and

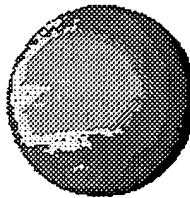
coefficient of static friction (μ_s) for Teflon is 0.04.

Teflon also has other interesting properties. It is inert meaning that it doesn't react to many chemicals. This property allows it to be used as containers and pipelines for reactive chemicals. Its melting point is 600 K.

Garvin Tam -- 2004

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